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## Juno ST handheld Customers FAQs

### What is the Juno ST handheld?

The Juno™ ST handheld is a highly productive yet affordable, non-rugged GPS receiver for field data collection and mobile GIS. The Juno ST handheld is Trimble's most compact, lightweight, fully-integrated field computer, providing 2 to 5 meter GPS positioning in real time or after postprocessing.

### What are the key features of the Juno ST handheld?

- Priced to equip an entire workforce, the Juno ST handheld is the most cost-effective data collection solution on the market.
- Lightweight and compact enough to carry in a shirt pocket, it provides the ultimate in portability for a mobile workforce.
- Increased productivity in harsh environments. The system has been specifically designed to provide positions in hostile environments, such as under forest canopy and up against buildings.
- Productive field and office workflow is guaranteed through compatibility with the entire range of Trimble® Mapping & GIS software. Existing Trimble customers can continue to use the same streamlined workflows and DGPS infrastructure.
- Powered by Windows Mobile® version 5.0 software allowing maximum flexibility in software choice. Windows Mobile version 5.0 includes familiar productivity tools Pocket Word, Pocket Excel, and Pocket Outlook®, as well as increased security features and persistent memory storage, so data is not lost even in the event of power loss.
- Integrated Bluetooth® and wireless LAN technology provide options for connecting to the Internet and corporate networks to access data and maps and to send and receive email and instant messages.
- Secure Digital (SD) card slot for expandable data storage ensures you always have ample storage for data and raster background maps.

### What is the Microsoft Windows Mobile 5.0 software?

Windows Mobile is Microsoft's operating system for mobile devices. With a familiar Microsoft user interface, it provides a wide range of standard software applications that work seamlessly with your

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desktop operating system. Windows Mobile software supports a host of communication options so you can be mobile and still have access to your enterprise data, email, and the Internet.

The Juno ST handheld runs Windows Mobile 5.0 software, allowing you to choose from the most comprehensive range of software available to meet your field requirements. In addition, Windows Mobile software features security enhancements, for more robust use when connected to a network, and persistent storage memory so your data is protected from unexpected power loss.

### **What software is required to support the Juno ST handheld?**

The Juno ST handheld is supported by the following field software applications:

- TerraSync™ software version 3.01
- Trimble GPScorrect™ extension for ESRI ArcPad software version 2.20
- Trimble GPS Controller software version 2.11
- Applications developed with GPS Pathfinder® Tools Software Development Kit (SDK) version 2.20
- Third-party field software that supports NMEA input

For standard differential postprocessing, GPS Pathfinder Office software version 4.00, or GPS Analyst™ extension version 2.10, with the latest updates applied, is required..

### **Can I use postprocessed differential correction with the Juno ST handheld?**

Data for postprocessing can be collected with TerraSync software version 3.01, GPScorrect extension version 2.20, or an application developed with GPS Pathfinder Tools SDK version 2.10. Data collected in GPS field software using the NMEA protocol cannot be postprocessed.

For standard differential postprocessing, GPS Pathfinder Office software version 4.00, or GPS Analyst extension version 2.10, with the latest updates applied, is required.

If required, data collected with real-time WAAS corrections in the field can be postprocessed in the office.

The Juno ST handheld does not output carrier data, so it is not possible to use carrier-postprocessing techniques.

### **What real-time options are available for the Juno ST handheld?**

The Juno ST handheld comes standard with WAAS capability to provide accuracy in real-time.

### **What GPS protocols are supported by the Juno ST handheld?**

The Juno ST handheld can output the NMEA and SiRF binary protocols. The receiver outputs NMEA data by default. If you connect to the receiver using Trimble GPS field software, NMEA output is switched off. The GPS Controller software can be used if you need to re-enable NMEA output.

## How do I use the Juno ST handheld to ensure best performance?

The Juno ST handheld is designed to be used with the antenna (under the Trimble logo) horizontal and with a clear view of the sky.

Although the receiver will track satellites if used in a non-horizontal position, such as your shirt or trouser pocket, Trimble recommends that you carry the handheld horizontally while recording GPS positions for best performance.

When collecting point features or vertices, Trimble recommends that you log GPS data for at least 30 seconds, using a 1 second logging rate. Collecting multiple positions for a static feature helps to improve accuracy by averaging out the errors in individual GPS positions. In heavy canopy, or other difficult environments, logging for 1 to 2 minutes is recommended.

Pausing briefly (5 to 10 seconds) before logging a point feature or vertex also helps to get the best performance from the receiver. This allows you to ensure that the internal GPS receiver is horizontal and correctly located over the feature you are mapping, and allows it to settle so that positions are not influenced by the handheld having recently been moving.

## How does the Juno ST handheld perform in harsh GPS conditions?

The Juno ST handheld is designed to track all available GPS satellites. This allows you to work in more environments and get the best results without the need to adjust the GPS mask settings. The receiver performs well in harsh GPS environments, such as under heavy canopy and in urban areas.

## How does the Juno ST handheld differ from a consumer PDA with GPS?

Consumer PDAs with GPS capability are often not designed for optimal GPS performance. The Juno ST handheld's design allows for optimal tracking of GPS and WAAS satellites in a wide range of conditions. When used with Trimble field and office software, the Juno ST handheld offers postprocessed DGPS capability for reliable 2 to 5 meter accuracy even when WAAS coverage is not available.

## Does the Juno ST handheld support TrimPix technology?

Yes, the Juno ST handheld does support TrimPix™ technology. Use the built-in wireless LAN radio in conjunction with TrimPix technology to connect to a range of WiFi-capable Nikon digital cameras for automated capture of digital images. With TrimPix technology you can take photos with a high resolution camera and send them wirelessly to your Juno ST handheld to be added as attributes to features in your GIS. TrimPix technology is free to download from [www.trimble.com/trimpix](http://www.trimble.com/trimpix)

## What can I use the Juno ST handheld's wireless LAN capabilities for?

The Juno ST handheld has an integrated 802.11b/g wireless Local Area Network (WLAN) radio that you can use to receive data anywhere within the range of a wireless LAN access point. Wireless LAN is sometimes referred to as wireless Ethernet. A wireless LAN connection can be used to connect to the Internet (at broadband speeds) via an 802.11b or 802.11g wireless LAN access point. 802.11b has a maximum speed of 11 Mbps. Security options such as 802.1x, WEP and WPA are supported.

There are many publicly available wireless LAN access points (also known as “hotspots”) available. To find publicly available access points, use locator Internet sites such as [www.jiwire.com](http://www.jiwire.com).

Wireless LAN can also be used to connect to a WiFi-capable Nikon camera in conjunction with TrimPix software.

Using the wireless LAN radio in a Juno ST handheld has no impact on GPS performance, but note that battery life will be consumed faster when there is an active connection to a wireless LAN access point.

### What can I use the Juno ST handheld's Bluetooth capabilities for?

The Juno ST handheld has an integrated Bluetooth radio that you can use to establish cable-free connections to other Bluetooth devices that are within 10 meters.

Using a Bluetooth connection, you can communicate with Bluetooth-enabled devices such as mobile phones, desktop computers, and many more. You can also communicate with peripheral devices that use Bluetooth adaptors instead of serial or USB connections.

Using the Bluetooth radio in a Juno ST handheld has no impact on GPS performance, but note that battery life will be consumed faster when there is an active connection to another Bluetooth device.

### What SDIO devices can be used with the Juno ST handheld?

If you have an SDIO device that you wish to use, it must have a Windows Mobile 5 driver that can be installed on the handheld. To date, the following devices have been successfully tested in combination with the Juno ST handheld:

- Pretec
  - SDIO Whanto Laser BarCode Scanner
- SocketCom
  - Go WiFi! P300x 802.11b/g SDIO card
  - SDSC BarCode Scanner SDIO card
  - SDIO 56K Modem
- Sychip
  - WLAN 802.11b SDIO card

**Note:** As these SDIO devices are provided by third-party suppliers, Trimble cannot guarantee the performance or compatibility of an SDIO device with the Juno ST handheld.

### Can I use an external antenna with the Juno ST handheld?

The Juno ST handheld is designed to achieve 2 to 5 meter (HRMS) accuracy with the integrated antenna after differential correction.

An external antenna is available as an optional accessory, and optimizes reception in:

- Low signal environments

- Marginal satellite coverage— increases availability of satellites with weak signals or low on horizon
- Vehicle—roof mounting minimizes signal blockage & reduces multipath

### **How is the Juno ST handheld powered?**

The Juno ST handheld comes standard with a rechargeable, removable lithium-ion battery that provides 6 hours of battery life in normal use with GPS. The battery is internally rechargeable using the international power supply, vehicle charger or USB cable that comes with the system. It takes 4 hours to fully recharge the battery.

### **What can I do to prolong battery life?**

To prolong the battery life it is recommended that you turn off wireless radio services such as Bluetooth and Wireless LAN when not in use. Disconnecting from the GPS receiver in your application when positioning is not required will also consume less power.

### **What is standard out of the box?**

Juno ST handhelds are provided as standard with the following components and accessories:

- Power supply with international adaptor kit
- Vehicle power adaptor
- 1 m mini USB cable
- Quick Start Guide
- Getting Started Disc (includes ActiveSync<sup>®</sup> software)
- Carry case
- Rechargeable Li-ion battery

### **What optional accessories are available for the Juno ST handheld?**

The following optional accessories are available for the Juno ST handheld:

- Replacement Li-Ion battery
- External GPS antenna
- Stylus (pack of 2)

### **Where can I buy the Juno ST handheld?**

The Juno ST handheld is available from Trimble's worldwide distributor network. In the U.S., the Juno ST handheld can also be purchased from the Trimble Store ([store.trimble.com](http://store.trimble.com)).

## Where can I get more information?

Visit the Trimble website at [www.trimble.com/junost.shtml](http://www.trimble.com/junost.shtml) for further information or contact your local Trimble Distributor.